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Notes on the Lepidoptera Rhopalocera of Tasmania

By

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These notes are a further contribution towards a knowledge of the butterflies of Tasmania. I am indebted to many friends, whose help is acknowledged throughout the following pages.

Argynnina tasmanica Lyell, 1900

The known range of this species has been considerably extended since Hardy (1917, 1918) noted specimens from Cradle Mt., the only record other than Strahan (the type locality) and Zeehan given by Waterhouse and Lyell (1914).

Late in January, 1947, an isolated colony was found near the Cuvier River close to its source at Lake Petrarch. The few specimens taken, all very worn, were flying around clumps of *Gahnia psittacorum* on a low rounded hill, evidently the remains of a former median moraine, in the centre of the broad 'button grass' valley of the Cuvier River between Mt. Hugel and Mt. Olympus, at an altitude of c. 3000 feet.

During December, 1947, S. Angel collected several females in the Surprise Valley, near Mt. Arrowsmith, at c. 1300 feet; these are indistinguishable from nominotypical *tasmanica* from sea level at Strahan. A pair taken at Derwent Bridge are noted below.

This year camp was made near Lake Petrarch in order to study the species in this 'island' colony, probably the most easterly in its range, and the highest altitude from which it has been recorded. Although we were three weeks earlier than in 1947, wind, sleet and heavy rain effectively shortened the flight time, so that less than a score were found sheltering in the clumps of *G. psittacorum*. All were badly worn, none of the females could be induced to lay, and the three eggs dissected from the body of the least battered female proved infertile.

The egg was noted to be greenish-yellow in colour, globular, flattened at the base, 0·75 mm. high, 1 mm. in diameter, almost smooth, with a very shallow, barely discernible micropylar area.

The early stages undoubtedly will be found to be similar to those of its ally, *A. hobartia* Westw., which we have reared from the egg without difficulty.

Reports of the occurrence of *tasmanica* in eastern Tasmania are doubtful and I have not seen an authentic specimen from any locality in the area east of the Cradle Mt.-Lake St. Clair National Park. As an instance of these doubtful

records I noted a male in the South Australian Museum (Lower coll.) labelled '3558 Hobart', which is indistinguishable from the rest of the series from Strahan. The reference to '3558' in Lower's register is 'Xenica Tasmaniana [sic] Lyell I sp. Hobart'.

Nothing resembling *tasmanica* has been found during six years of close searching in the Hobart area so that I am reasonably certain that Lower's specimen is labelled with the probable point of despatch, not with the point of capture.

The pair taken by S. Angel at Derwent Bridge, c. 2400 feet, December 10, 1947, are noteworthy as varying towards *hobartia*. The male has only three ocelli on the hindwing above, a character of *hobartia*; otherwise it is a normal specimen. Below, the hindwing lacks the whitish suffusion on either side of the central band. The female resembles *hobartia* closely in the ground colour and markings above, the eell spot of the hindwing being joined to the discal spot near the apex as in the 'aberrant' example noted by Waterhouse and Lyell (1914), but with four ocelli and a black dot in area 6 near the margin as is usual in *tasmanica*. Below, its hindwing lacks the dark band edged on either side with whitish, but has the normal complement of oeelli.

When we have more speeimens from the eastern areas of the central mountain plateau it is just possible that the dark *tasmanica* of the western seaboard may be found to be linked by intermediate forms with the lighter *hobartia* from the eastern areas of Tasmania, just as *Oreixenica lathoniella laranda* W. and L. from the West Coast grades into *O. l. lathoniella* Westw. from eastern Tasmania.

Nesoxenica leprea elia Waterhouse and Lyell, 1914

The apparent association of this species with the Tasmanian Beech, *Fagus cunninghami*, has been noted by Turner (1926) and Waterhouse (1932). Turner hazarded the opinion that the larva probably was a grass feeder, yet although by 1946 I was able to show the extent of the range of the two forms of *leprea* within fairly close limits, its life history remained unknown despite a considerable search.

In January, 1947, my wife and I camped near Lake Marion primarily to study *elia*, and towards the end of our stay had the good fortune to watch a female ovipositing.

Under the southern shoulder of Mt. Gould, between Lake St. Clair and Lake Marion, at an altitude of e. 2600 feet, there is an extensive forest of 'myrtle' *(Fagus)*. Here *elia* is not uneommon around the edges and in the occasional glades. It was in one of these sunny openings in the forest, only a few yards square, at about 3 p.m. on January 28, that a female was seen to fly down from the upper branches of a large *Fagus* and settle on a narrow leaved 'grass' growing in tufts 2-3 inches high among the moss earpeting the ground. A single egg was laid on the under edge of the leaf about an inch from the ground, the female curving her body down and around in order to reach the extreme edge of the leaf. Having laid but one egg the female returned to the sunny tree tops, and although we watched intently for several days we were not favoured with another glimpse of the egg-laying habits.

The egg was higher than wide, 1 mm. high and 0·75 mm. diameter; pale green, shining; with fine vertical ribbing from the base to a shallow micropylar area. Unfortunately, on February 11, it hatched before a fuller description was possible.

The larva made its first meal of the shell, and at 24 hours was 2·5 mm. in length; the head 0·5 mm. broad, light brown; the body cylindrical, half the breadth of the head, light green; a darker green line along the dorsum, a somewhat fainter parallel subdorsal line and a much fainter line connecting the single black raised tubercle on each segment.

Owing to frequent absences from home continued observations were not possible, but by March 30 the larva was noted as in its second instar; 11 mm. long; head green, a shade darker than the body; the lateral lines darker green, with the lower, connecting the tubercles, a distinct yellowish-green. On May 2 the larva was seen to have just shed its skin (? third instar); in colour it remained as before, except that the lower lateral line was now yellowish-white. By May 28 the larva was noted as 13 mm. in length, in form a typical satyrid with a bifid terminal segment.

The larva kept low down on a stem well inside the tuft during the day and night for a week or more at a time. Thus it was noted feeding at midnight on June 22; then not until July 14, when it was seen feeding at 11.30 p.m.; again on July 30, moving up to feed at 11.10 p.m.; and again on August 4, moving up a stem at about the same time. From this date, unfortunately, the larva refused to feed and gradually shrivelled.

The 'grass' has been determined by Miss W. M. Curtis as *Uncinia tenella* R.Br., a plant of the order Cyperaceae. The problem of the apparent association of *l. elia*, as well as *l. leprea*, with *Fagus cunninghami* is thus solved, since the foodplant, *Uncinia*, is characteristic of the *Fagus* forests, being commonly found among the moss carpeting the ground in the heavy rainfall areas at an altitude of about 2000 feet affected by the Tasmanian 'myrtle'.

In nature snow would cover the foodplant to a depth of inches at frequent intervals throughout the winter months; if it is possible to judge by a simple example it would seem that *l. elia* has the habit of feeding at short intervals whenever conditions would allow and for the rest of the time it burrows far down into the tufts for shelter from the elements.

Pseudalmenus chlorinda Blanchard [1848]

In the original description Blanchard gives 'Tasmanie' as the locality for this form, presumably from specimens obtained during the stay of the *Astrolabe* and *Zélée* in Hobart during December, 1839. Waterhouse (1928) records eight males from Snug River, distant some twenty miles from Hobart, but it is certain that the great majority of specimens now in collections have come from near Launceston, chiefly through the efforts of the late F. M. Littler, who bred the species in large numbers.

Chlorinda may have been found more commonly in the Hobart district in earlier years, but advancing civilization and destructive bush fires seem to have exterminated it in this area. I have records of one female only, taken by J. R. Cunningham at Kingston, November 16, 1946. Several parasitised pupae were later found nearby, but a fire swept through this area in 1947 and since then *chlorinda* has not been seen in the locality, probably the last near Hobart.

The Kingston female is slightly smaller (forewing length 16 mm.) when compared with Blanchard's figure, the orange band on the forewing being 4 mm. broad, only tapering very slightly towards the hind margin, and the black cell spot wholly within the orange band. The markings below are as figured by Blanchard, except that the black spots on the inner edge of the red band on the hindwing are lacking.

Despite the wide variation in this species, I have not seen a female from Tasmania which exactly matches figs. 17-18 of Blanchard's plate.

Waterhouse (1912, 1928) discusses the synonymy, but the exact date of publication of plate 3 of the Atlas, Insectes, in the 'Voyage au Pôle Sud et dans l'Oceanie . . . l'Astrolabe et la Zélée . . . ' remained unknown, leaving a doubt as to the valid specific name.

Sherborn (1901) gives only the date of the text, 1853; and M. Jules Bourgogne *in litt.* informs me that after much searching there is nothing in the Musée National d'Hist. nat., Paris, that would enable an exact date to be given for the plates. However, my friend, A. Musgrave, of the Australian Museum, has very kindly drawn my attention to a note by Schaum which enables the date to be set with some certainty.

On p. 22-23 of the 'Bericht . . . der Entom. . . . während 1848' there is a reference to the 'Voyage au Pôle Sud . . . " with the following note; 'Von Insecten sind bisher 19 Tafeln mit Coleopteren, drei mit Lepidopteren ausgegeben, deren Publication zum grössten Theil schon in fruhere Jahre fallt. Da aber noch gar kein Text erscheinen ist, so bleibt eine Aufzahlung der vielen neuen abgebildeten Arten besser einem spätern Berichte vorbehalten'.

This note by Schaum, dated 1850, shows that plate 3 of the 'Voyage au Pôle Sud' on which Blanchard figures *Thecla chlorinda* was issued at some time during 1848, and failing more exact information the plate must be assumed to have been published not earlier than December 31, 1848.

Thecla chlorinda Blanchard [1848] ('Tasmanie') thus had almost three years priority over *Ialmenus myrsilus* (Doubleday MS.) Westwood [5th Dec. 1851] ('Van Diemen's Land'), and since both almost certainly came from the vicinity of Hobart, *myrsilus* falls as a direct synonym.

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